

What is claimed is:

1. An articulating catheter for cryoablating target tissue, the target tissue having a curved surface at a treatment site, said catheter comprising:
an elongated, thermally conductive tube having an outer surface
5 and formed with a plurality of transverse notches, with each said notch establishing opposed first and second edges;
means for advancing said tube to the treatment site;
means for reconfiguring said tube from a first configuration wherein said tube is substantially cylindrical and defines a longitudinal
10 axis and each edge is inclined relative to a plane that is substantially perpendicular to said axis, to a second configuration wherein each said first edge is juxtaposed with a respective said second edge to shape at least a portion of the outer surface of said tube to substantially conform with the surface of the target tissue; and
15 means for cooling said tube to cryoablate the target tissue.
2. An articulating catheter as recited in claim 1 wherein said first and second edges of each said notch meet at first and second corners and said notches are arranged with said first corner of each notch lying substantially along a common line that extends parallel to said longitudinal
20 axis when said tube is in said first configuration.
3. An articulating catheter as recited in claim 1 wherein said tube is made of stainless steel.
4. An articulating catheter as recited in claim 1 wherein said advancing means comprises a catheter tube.
- 25 5. An articulating catheter as recited in claim 1 wherein said plurality of notches comprises at least three said notches.

6. An articulating catheter as recited in claim 1 wherein said reconfiguring means comprises a pull-wire.

7. An articulating catheter as recited in claim 6 wherein said tube extends from a proximal end to a distal end and said pull-wire is attached to said distal end of said tube.

8. An articulating catheter as recited in claim 1 wherein said cooling means comprises a cryo-element having an expansion chamber for expanding a refrigerant therein.

9. A reshapeable contact segment for use in a catheter for cryoablating target tissue having a curved surface, said contact segment comprising:

an elongated, thermally conductive tube having an outer surface and formed with a plurality of transverse notches, with each said notch establishing opposed first and second edges, wherein said tube is reshapeable between a first cylindrical configuration in which each edge is inclined relative to a plane that is substantially perpendicular to a longitudinal axis defined by the cylindrical tube, and a second configuration in which each said first edge is juxtaposed with a respective said second edge to shape at least a portion of the outer surface of said tube to substantially conform with the surface of the target tissue.

10. A reshapeable contact segment as recited in claim 9 wherein said first and second edges of each said notch meet at first and second corners and said notches are arranged with said first corner of each notch lying substantially along a common line that extends parallel to said longitudinal axis when said tube is in said first configuration.

11. A reshapeable contact segment as recited in claim 9 wherein said tube is made of stainless steel.

12. A reshapeable contact segment as recited in claim 9 wherein said plurality of notches comprises at least three said notches.

5 13. A reshapeable contact segment as recited in claim 9 wherein said segment further comprises a pull-wire having a distal end and a proximal end with said distal end attached to said tube.

14. A reshapeable contact segment as recited in claim 13 wherein said tube extends from a proximal end to a distal end and said pull-wire is
10 attached to said distal end of said tube.

15. A method for cryoablating target tissue, the target tissue having a curved surface at a treatment site, said method comprising the steps of:

15 providing an elongated, thermally conductive tube having an outer surface and formed with a plurality of transverse notches, with each said notch establishing opposed first and second edges;

 configuring said tube into a first configuration wherein said tube is substantially cylindrical and defines a longitudinal axis and each edge is inclined relative to a plane that is substantially perpendicular to said axis,

20 advancing said tube to the treatment site;

 configuring said tube into a second configuration wherein each said first edge is juxtaposed with a respective said second edge to shape at least a portion of the outer surface of said tube to substantially conform with the surface of the target tissue;

25 contacting the target tissue with said tube; and
 cooling said tube to cryoablate the target tissue.

16. A method as recited in claim 15 wherein said first and second edges of each said notch meet at first and second corners and said notches are arranged with said first corner of each notch lying substantially along a common line that extends parallel to said longitudinal axis when said tube is in
5 said first configuration.

17. A method as recited in claim 15 wherein said tube is made of stainless steel.

18. A method as recited in claim 15 wherein said advancing step is accomplished using a catheter tube.

10 19. A method as recited in claim 15 wherein said plurality of notches comprises at least three said notches.

20. A method as recited in claim 15 wherein reconfiguring step is accomplished using a pull-wire.